

REMARKS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Office Action and prior art relied upon have been carefully considered. In an effort to expedite the prosecution, the claims have been clarified to avoid further rejection under 35 U.S.C. § 112, first and second paragraphs as well as the objections recited in paragraphs 3 and 4 of the Office Action. However, applicant is not certain as to the Examiner's position in paragraph 3.

The cited Martin reference (US 4,847,038) discloses a procedure for the replacement of a steam generator of a PWR nuclear reactor, in which sections 40 and 41 of the primary circuit are sectioned (figure 7A), in which the remaining ends of pipes 3 and 5 are machined using a chamfering machine of the orbital type, a part of which is located partially inside the pipes (figures 17 and 18 and description column 10, line 64 to column 11, line 16), and finally in which the new steam generator is welded on the remaining ends of pipes 3 and 5 using a TIG orbital welding process (column 11, lines 17 to 29).

The cited Martin et al reference (US 4,782,727) discloses a process for replacing a sleeve 5, 5' located inside a connector 3, 3' connecting a pipe 1, 1' on another pipe 2, 2'. The pipe 2, 2' may be a pipe of the primary circuit of a PWR nuclear reactor. The process includes a step of cutting the pipe 1 (figure 3), a step of chamfering the free ends of the pipe 1 after cutting of the pipe (using the device of figures 4A, 4B), and a step of welding a new pipe 1 bearing a new sleeve 5 on the remaining end of pipe 1 using a TIG orbital device (column 10, lines 10 to 31). The new pipe is held in position during the welding operation.

Laing (US 5,059,765) discloses an automatic welding machine, able to move along the interior of a pipeline.

In Martin '038 and '727 the chamfering and welding devices are introduced into the pipe through the free space left by the portion of the pipe that was cut and removed, before the new portion of the pipe is put in place.

The present invention includes means for introducing the means for carrying out work in the primary pipe through one of the first and second components of the primary circuit of the nuclear reactor after a new replacement section has been welded to the remaining parts of the primary pipe, and according to which the means for carrying out the work is able to move along within the primary pipe from said first or second components to the new replacement section welded to the remaining pipes of the primary circuit. This patentably distinguishes the invention of claim 15 from '038 and '727 so that the claims are not anticipated under 35 U.S.C. § 102.

Neither is claim 15 obvious over Laing combined with '038 and '727. The automatic welder of Laing is intended to be used in pipelines, e.g. in large size pipes extending for a considerable distance, for the transportation of petroleum, petroleum products, natural gas, water, etc.... There are no indications in Laing that the automatic welder can be used in the primary pipe of a PWR nuclear reactor.

New claims 20 to 24 are directed to features of the invention which are believed to be patentable.

According to claim 20, one of the first or second components is chosen between either a reactor vessel or a primary pump of a nuclear reactor. In '038 and '727, the means for carrying out work in the primary pipe are not introduced through the reactor vessel or the primary pump. In Laing, there is no indication that the automatic welder can be introduced through the reactor vessel or the primary pump of a nuclear reactor.

According to claim 21, the means for carrying out the work comprise means to carry out at least one operation of machining, inspecting or welding an inner part of the joined welded ends of the new replacement section and of the remaining parts of the primary pipe. This feature

is not disclosed in '038 and '727 since these patents disclose means for machining, inspecting and welding the remaining parts of the primary pipe before a new replacement section is welded. There are no indications in these references regarding how the devices for machining, inspecting or welding can be adapted to work on an inner part of the joined welded ends of the new replacement section and the remaining part of the primary pipe.

None of the references discussed above discloses means for carrying out work comprising a anthropomorphic robot arm, wherein the arm incorporates an end part bearing a rapid attachment device for automatic tools (claim 23).

Similarly, none of the references discussed above disclose that such an arm has six axes of motor driven rotational movement (claim 24).

The IDS references referred to in paragraph 7 of the Office Action are attached.

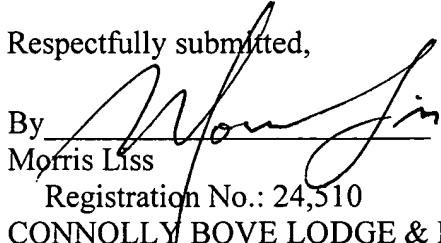
In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185, under Order No. 20513-00590-US1 from which the undersigned is authorized to draw.

Dated: May 25, 2005

Respectfully submitted,

By 
Morris Liss

Registration No.: 24,510
CONNOLLY BOVE LODGE & HUTZ LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant